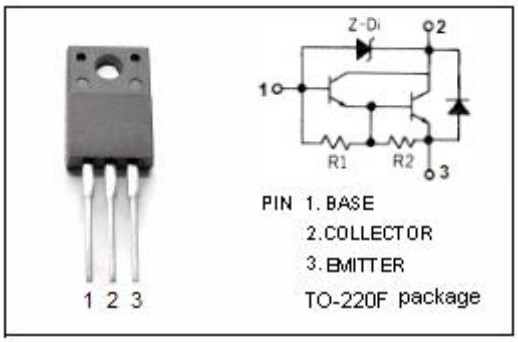
isc Silicon NPN Darlington Power Transistor 2SD2141

DESCRIPTION

- High DC Current Gain-
  : h_{FE} = 1500(Min)@ I_C= 3A
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$ = 1.5V(Max)@ I_C= 4A
- Incorporating a built-in zener diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

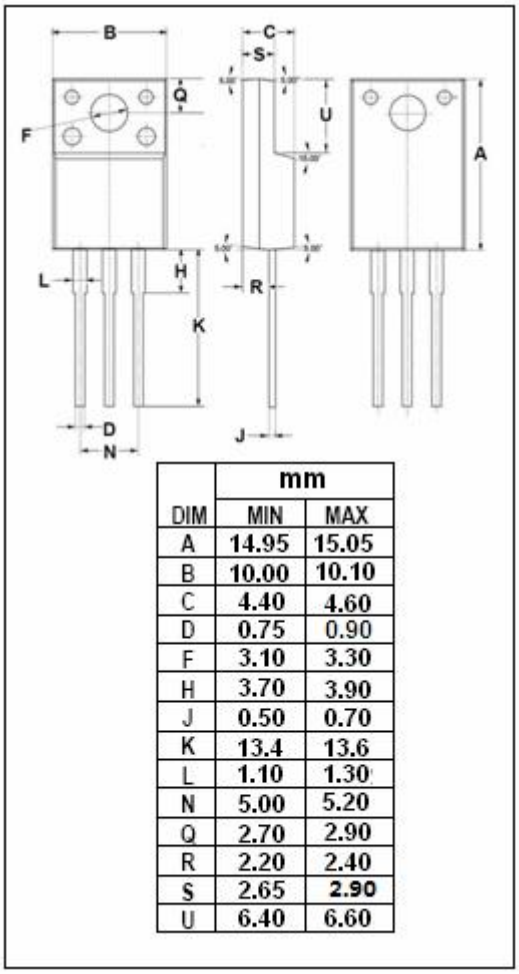


APPLICATIONS

- Designed for use in ignitor, driver for solenoid，motor and general purpose applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	330-430	V
V_{CEO}	Collector-Emitter Voltage	330-430	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Base Current-Peak	10	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ T_C=25℃	35	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	14.95	15.05
B	10.00	10.10
C	4.40	4.60
D	0.75	0.90
F	3.10	3.30
H	3.70	3.90
J	0.50	0.70
K	13.4	13.6
L	1.10	1.30
N	5.00	5.20
Q	2.70	2.90
R	2.20	2.40
S	2.65	2.90
U	6.40	6.60

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 25mA; I_B= 0	330		430	V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C=0.1mA; I_E= 0	330		430	V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 20mA; I_C= 0	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 4A; I_B= 20mA			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 4A; I_B= 20mA			2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 330V; I_E= 0			10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0			20	mA
h_{FE}	DC Current Gain	I_C= 3A; V_{CE}= 2V	1500			
f_T	Current-Gain—Bandwidth Product	I_E= 0.5A ; V_{CE}= 12V		20		MHz
C_{OB}	Output Capacitance	I_E=0 ; V_{CB}=10V;f_{test}=1.0MHz		95		pF